

Live Migration Downtime Analysis of a VNF Guest for a Proposed Optical FMC Network Architecture - DTU Orbit (08/11/2017)

Live Migration Downtime Analysis of a VNF Guest for a Proposed Optical FMC Network Architecture

Fixed Mobile Convergence (FMC) implies use of a shared optical fronthaul network infrastructure able to carry transparently both fixed and mobile traffic including Wi-Fi, Mobile and fixed Ethernet. Network Function Virtualization (NFV) is a main enabler for FMC using a shared infrastructure for fixed and mobile gateways. Live migration, a virtualization key-feature, offers load-balancing, increased energy efficiency, application elasticity and other worthy advantages. This paper presents the evaluation of migrating a VNF over an FMC infrastructure. Our results show that, performing a live migration over a dedicated connection yielded zero downtime and met a benchmark delay. The following scenario, where the ongoing connection is re-routed on a different optical path, shows the successful completion of the migration with an increase in delay of 2.4 seconds (22% higher than the benchmark) and only 2.1 seconds downtime

General information

State: Published

Organisations: Department of Photonics Engineering, Metro-Access and Short Range Systems, ADVA Optical Networking SE, Kiel University

Authors: Andrus, B. (Intern), Autenrieth, A. (Ekstern), Pachnicke, S. (Ekstern), Vegas Olmos, J. J. (Intern), Tafur Monroy, I. (Intern)

Number of pages: 5

Publication date: 2016

Host publication information

Title of host publication: Proceedings of ITG-Fachtagung Photonische Netze 2016

Main Research Area: Technical/natural sciences

Conference: 17. ITG-Fachtagung Photonische Netze 2016, Leipzig, Germany, 12/05/2016 - 12/05/2016

Source: PublicationPreSubmission

Source-ID: 122376581

Publication: Research - peer-review › Article in proceedings – Annual report year: 2016